

<b>Notice of Allowability</b>	Application N .	Applicant(s)	
	09/559,206	WONG, DANIEL MANHUNG	
	Examin r	Art Unit	
	Baoquoc N. To	2162	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/24/2006.
2. ☒ The allowed claim(s) is/are 1, 3, 7-9, 11-12, 15-17, 19-20, 23-26, 28-29, 31-32 and 34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

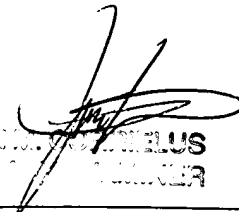
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>05/24/2006</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|--|---|

  
 Baoquoc N. To  
 Examiner

1                                   **DETAILED ACTION**

2     1.     Claims 1, 3, 5, 7-9, 11-13, 15-17, 19-21, 23-26, 28-29, 31-32 and  
3     34 are pending in this application.

4

5                                   **EXAMINER'S AMENDMENT**

6     2.     An examiner's amendment to the record appears below. Should the  
7     changes and/or additions be unacceptable to applicant, an amendment  
8     may be filed as provided by 37 CFR 1.312. To ensure consideration of  
9     such an amendment, it MUST be submitted no later than the payment of  
10    the issue fee.

11           Authorization for this examiner's amendment was given in a  
12    telephone interview with Edward J. Grundler, Reg. No, 47,615 on May  
13    24<sup>th</sup>, 2006.

14           Please amend the application as follows:

15           1. (Currently amended) A computer-implemented method for  
16    selectively auditing accesses to a relational database, comprising:  
17           receiving a query for the relational database;  
18           selectively auditing an access to the relational database,  
19                        wherein selectively auditing the access involves  
20           automatically modifying the query prior to processing the  
21           query,

22                   ~~wherein processing the query causes an audit record~~  
23                   ~~to be created and recorded only for rows in relational tables~~  
24                   ~~accessed by the query and that satisfy an auditing condition,~~  
25                   wherein the auditing condition specifies a condition based on  
26                   a value of a field in a row in the relational database, and  
27                   wherein satisfying the auditing condition allows  
28                   selective auditing of the query,  
29                   processing the modified query to produce a query result, wherein  
30                   processing the modified query includes:  
31                   creating the auditing records only for rows in relational  
32                   tables accessed by the query and that satisfy the auditing  
33                   condition, and  
34                   recording the audit record in an audit record store;  
35                   and  
36                   returning the query result;  
37                   wherein if the query modifies at least one entry in the relational  
38                   database, using a relational database system trigger to create and record  
39                   the audit record for the modification to the relational database.

40

41                   2 (Canceled).

42

43           3. (Previously presented) The method of claim 1, further comprising  
44   ensuring the case statement is evaluated near the end of the query  
45   processing so the case statement is evaluated only after other conditions  
46   of the query are satisfied.

47

48           4-6 (Canceled).

49

50           7. (Original) The method of claim 1, wherein the audit record  
51   includes:

52           a user name for a user making the query;

53           a time stamp specifying a time of the query; and

54           a text of the query.

55

56           8. (Original) The method of claim 1, wherein the auditing condition  
57   includes a condition for a field within the relational database.

58

59           9. (Currently amended) A computer-readable storage medium  
60   storing instructions to be executed by a computer causing the computer to  
61   perform a method for selectively auditing accesses to a relational  
62   database, the method comprising:

63           receiving a query for the relational database;

64           selectively auditing an access to the relational database,  
65                               wherein selectively auditing the access involves  
66           automatically modifying the query prior to processing the  
67           query,  
68                               ~~wherein processing the query causes an audit record~~  
69           ~~to be created and recorded only for rows in relational tables~~  
70           ~~accessed by the query and that satisfy an auditing condition,~~  
71                               wherein the auditing condition specifies a condition  
72           based on a value of a field in a row in the relational  
73           database, and  
74                               wherein satisfying the auditing condition allows  
75           selective auditing of the query,  
76           processing the modified query to produce a query result, wherein  
77   processing the modified query includes:  
78                               creating the auditing records only for rows in relational  
79           tables accessed by the query and that satisfy the auditing  
80           condition, and  
81                               recording the audit record in an audit record store;  
82           and  
83           returning the query result;

84        wherein if the query modifies at least one entry in the relational  
85        database, the method further comprises using a relational database  
86        system trigger to create and record the audit record for the modification to  
87        the relational database.

88

89        10 (Canceled).

90

91        11. (Previously presented) The computer-readable storage medium  
92        of claim 9, wherein the method further comprises ensuring the case  
93        statement is evaluated near the end of the query processing so the case  
94        statement is evaluated only after other conditions of the query are  
95        satisfied.

96

97        12. (Original) The computer-readable storage medium of claim 9,  
98        wherein the method further comprises retrieving the auditing condition for  
99        a given table from a data structure associated with the given table.

100

101        13-14 (Canceled).

102

103        15. (Original) The computer-readable storage medium of claim 9,  
104        wherein the audit record includes:

105           a user name for a user making the query;  
106           a time stamp specifying a time of the query; and  
107           a text of the query.

108

109           16. (Original) The computer-readable storage medium of claim 9,  
110 wherein the auditing condition includes a condition for a field within the  
111 relational database.

112

113           17. (Currently amended) An apparatus for selectively auditing  
114 accesses to a relational database, comprising:

115           a receiving mechanism configured to receive a query for the  
116 relational database;

117           a selective auditing mechanism configured to selectively audit an  
118 access to the relational database,

119                       wherein selectively auditing the access involves

120                       automatically modifying the query prior to processing the  
121                       query,

122                       ~~wherein processing the query causes an audit record~~  
123                       ~~to be created and recorded only for rows in relational tables~~  
124                       ~~accessed by the query and satisfying an auditing condition,~~

125                       wherein the auditing condition specifies a condition

126                   based on a value of a field in a row in the relational  
127                   database, and  
128                   wherein satisfying the auditing condition allows  
129                   selective auditing of the query,  
130           a query processor configured to process the modified query to  
131   produce a query result, wherein processing the modified query includes:  
132                   creating the auditing records only for rows in relational  
133                   tables accessed by the query and that satisfy the auditing  
134                   condition, and  
135                   recording the audit record in an audit record store;  
136                   and  
137           a returning mechanism configured to return the query result;  
138           wherein if the query modifies at least one entry in the relational  
139   database, the apparatus uses a relational database system trigger to  
140   create and record the audit record for the modification to the relational  
141   database.

142

143           18 (Canceled).

144

145           19. (Previously presented) The apparatus of claim 17, wherein the  
146   query modification mechanism is configured to ensure the case statement



147 is evaluated near the end of the query processing so the case statement is  
148 evaluated only after other conditions of the query are satisfied.

149

150

151 20. (Original) The apparatus of claim 17, wherein the query  
152 modification mechanism is configured to retrieve the auditing condition for  
153 a given table from a data structure associated with the given table.

154

155 21-22 (Canceled).

156

157 23. (Original) The apparatus of claim 17, wherein the audit record  
158 includes:

159 a user name for a user making the query;  
160 a time stamp specifying a time of the query; and  
161 a text of the query.

162

163 24. (Original) The apparatus of claim 17, wherein the auditing  
164 condition includes a condition for a field within the relational database.

165

166           25. (Previously presented) The method of claim 1, further  
167   comprising retrieving the auditing condition for a given table from a data  
168   structure associated with the given table.

169

170           26. (Currently amended) A computer-implemented method for  
171   selectively auditing accesses to a relational database, comprising:  
172           receiving a database operation for the relational database;  
173           selectively auditing an access to the relational database based on  
174   an auditing condition, wherein the auditing condition specifies a condition  
175   based on a value of a field in a row in the relational database;  
176           processing the database operation to produce a database  
177   operation result, wherein processing the database operation includes:  
178                    creating the auditing records only for selected rows in  
179                    the relational database that are accessed by the database  
180                    operation and that satisfy the auditing condition, and  
181                    recording the audit record in an audit record store;  
182           and  
183           returning the database operation result;  
184           wherein selectively auditing the access involves automatically  
185   modifying the database operation prior to processing the database  
186   operation,

187            wherein satisfying the auditing condition allows selective auditing of  
188   the database operation and not for other rows;

189            wherein satisfying the auditing condition allows selective auditing of  
190   the database operation; and

191            wherein if the database operation modifies at least one entry in the  
192   relational database, using a relational database system trigger to create  
193   and record the audit record for the modification to the relational database.

194

195            27 (Canceled).

196

197            28. (Previously presented) The method of claim 26, wherein the  
198   auditing condition includes a condition for at least two fields within the  
199   relational database.

200

201            29. (Currently amended) A computer-readable storage medium  
202   storing instructions that when executed by a computer cause the computer  
203   to perform a method for selectively auditing accesses to a relational  
204   database, the method comprising:

205            receiving a database operation for the relational database;

206           selectively auditing an access to the relational database based on  
207   an auditing condition, wherein the auditing condition specifies a condition  
208   based on a value of a field in a row in the relational database;  
209           processing the database operation to produce a database  
210   operation result, wherein processing the database operation includes:  
211                   creating the auditing records only for selected rows in  
212                   the relational database that are accessed by the database  
213                   operation and that satisfy the auditing condition, and  
214                   recording the audit record in an audit record store;  
215           and  
216           returning the database operation result;  
217           wherein selectively auditing the access involves automatically  
218   modifying the database operation prior to processing the database  
219   operation,  
220           wherein satisfying the auditing condition allows selective auditing of  
221   the database operation and not for other rows;  
222           wherein satisfying the auditing condition allows selective auditing of  
223   the database operation; and  
224           wherein if the database operation modifies at least one entry in the  
225   relational database, using a relational database system trigger to create  
226   and record the audit record for the modification to the relational database.

227

228           30 (Canceled).

229

230           31. (Previously presented) The computer-readable storage  
231 medium of claim 29, wherein the auditing condition includes a condition for  
232 at least two fields within the relational database.

233

234           32. (Currently amended) An apparatus for selectively auditing  
235 accesses to a relational database, comprising:  
236           a receiving mechanism configured to receive a database operation  
237 for the relational database;  
238           a selective auditing mechanism configured to selectively audit an  
239 access to the relational database based on an auditing condition, wherein  
240 the auditing condition specifies a condition based on a value of a field in a  
241 row in the relational database;  
242           a processing mechanism configured to process the database  
243 operation to produce a database operation result;  
244           a creating mechanism configured to create the auditing records  
245 only for selected rows in the relational database that are accessed by the  
246 database operation and that satisfy the auditing condition, and  
247           a recording mechanism configured to record the audit record in an

248     audit record store; and  
249             a returning mechanism configured to return the database operation  
250     result;  
251             wherein selectively auditing the access involves automatically  
252     modifying the database operation prior to processing the database  
253     operation,  
254             wherein satisfying the auditing condition allows selective auditing of  
255     the database operation and not for other rows;  
256             wherein satisfying the auditing condition allows selective auditing of  
257     the database operation; and  
258             wherein if the database operation modifies at least one entry in the  
259     relational database, the apparatus uses a relational database system  
260     trigger to create and record the audit record for the modification to the  
261     relational database.

262

263             33 (Canceled).

264

265             34. (Previously presented) The apparatus of claim 32, wherein the  
266     auditing condition includes a condition for at least two fields within the  
267     relational database.

268

269 ***Allowable Subject Matter***

270 3. Claims 1, 3, 7-9, 11-12, 15-17, 19-20, 23-26, 28-29, 31-32 and 34  
271 are allowed over prior art made of record.

272 The following is an examiner's statement of reasons for allowance:

273 As to claim 1, none of the prior art alone or in combination either  
274 teach or suggests "selectively auditing an access to the relational  
275 database, wherein selectively auditing the access involves automatically  
276 modifying the query prior to processing the query, wherein the auditing  
277 condition specifies a condition based on a value of a field in a row in the  
278 relational database, and wherein satisfying the auditing condition allows  
279 selective auditing of the query, processing the modified query to produce  
280 a query result, wherein processing the modified query includes: creating  
281 the auditing records only for rows in relational tables accessed by the  
282 query and that satisfy the auditing condition, and recording the audit  
283 record in an audit record store; and returning the query result; wherein if  
284 the query modifies at least one entry in the relational database, using a  
285 relational database system trigger to create and record the audit record  
286 for the modification to the relational database" with "receiving a query for  
287 the relational database."

288 Claims 3, 7-8 and 25 are depended on claim 1; therefore, claims 3  
289 and 7-8 are allowed under the same reason.

290           Claim 9 is a computer-readable storage medium storing instructions  
291           to be executed by a computer to perform the method as discloses in  
292           claim 1; therefore, claim 9 is allowed under the same reason as to claim  
293           1.

294           Claims 11-12 and 15 are depended on claim 9; therefore, claims  
295           11-12 and 15 are allowed under the same reason as to claim 9.

296           Claim 17 is an apparatus for performing the method in claim 1;  
297           therefore, claim 17 is allowed under the same reason as to claim 1.

298           Claims 19-20 and 23-24 are depended on claim 17; therefore,  
299           claims 19-20 and 23-24 are allowed under the same reason as to claim  
300           17.

301           Claim 26 is a method for performing the steps similar to claim 1;  
302           therefore, claim 26 is allowed under the same reason as to claim 1.

303           Claim 28 is depended on claim 26; therefore, claim 27 is allowed  
304           under the same reason as to claim 26.

305           Claim 29 is a computer-readable storage medium storing  
306           instructions when execute perform the method or claim 26; claim 28 is  
307           allowed under the same reason as well.

308           Claim 31 is depended on claim 29; therefore, claim 31 is allowed  
309           under the same reason as to claim 31.

310           Claim 32 is an apparatus for perform the method of claim 26;



311 therefore, claim 32 is allowed under the same reason as claim 26.

312 Claim 34 is depended on claim 32; therefore, claim 34 is allowed  
313 under the same reason as to claim 32.

314 Any comments considered necessary by applicant must be  
315 submitted no later than the payment of the issue fee and, to avoid  
316 processing delays, should preferably accompany the issue fee. Such  
317 submissions should be clearly labeled "Comments on Statement of  
318 Reasons for Allowance."

319

320 ***Conclusion***

321 4. The prior art made of record and not relied upon is considered  
322 pertinent to applicant's disclosure.

323 Patent:

324 Morrison et al. (US. Patent No. 6,382,357 B1) Patent date: 05/07/2002.

325 Williams (US. Patent No. 5,600,554) Patent date: 04/04/1997.

326 Asad et al. (US. Patent No. 6,725,240 B1) Patent date: 04/20/2004.

327 Adams et al. (US. Patent No. 6,931,573 B2) Patent date: 08/16/2005.

328 NPL:

329 Bhargava et al. Relational database system with zero information  
330 loss, (knowledge and data engineering), IEEE Transaction, 1993, pages  
331 76-87.

332

333

334

**Contact Information**

335

5. Any inquiry concerning this communication or earlier

336

communications from the examiner should be directed to Baoquoc N. To

337

whose telephone number is at 571-272-4041 or via e-mail

338

BaoquocN.To@uspto.gov. The examiner can normally be reached on

339

Monday-Friday: 8:00 AM – 4:30 PM, EST.

340

If attempts to reach the examiner by telephone are unsuccessful,

341

the examiner's supervisor, John Breene can be reached at 571-272-4107.

342

Any inquiry of a general nature or relating to the status of this

343

application or proceeding should be directed to the receptionist whose

344

telephone number is (703) 305-3900.

345

Any response to this action should be mailed to:

346

Commissioner of Patents and Trademarks

347

Washington, D.C. 20231.

348

The fax numbers for the organization where this application or

349

proceeding is assigned are as follow:

350

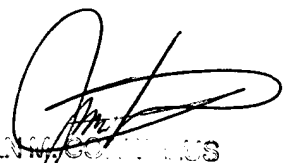
(571) –273-8300 [Official Communication]

351

BQ To

352

May 25th, 2006



JEAN M. COLLINS  
PRIMARY EXAMINER  
USPTO